

```
RRRRRRRRRRR PPPPPPPPPP GGGGGGGGGG RRRRRRRRRR TTTTTTTTTT LLL
RRRRRRRRRRR PPPPPPPPPP GGGGGGGGGG RRRRRRRRRR TTTTTTTTTT LLL
RRRRRRRRRRR PPPPPPPPPP GGGGGGGGGG RRRRRRRRRR TTTTTTTTTT LLL
RRR          RRR PPP      PPP   GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      PPP   GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      PPP   GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      PPP   GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      PPP   GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      PPP   GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      PPP   GGG          RRR      RRR      TTT      LLL
RRRRRRRRRRR PPPPPPPPPP GGG          RRRRRRRRRR      TTT      LLL
RRRRRRRRRRR PPPPPPPPPP GGG          RRRRRRRRRR      TTT      LLL
RRRRRRRRRRR PPPPPPPPPP GGG          RRRRRRRRRR      TTT      LLL
RRR    RRR    PPP      GGG    GGGGGGGG RRR    RRR      TTT      LLL
RRR    RRR    PPP      GGG    GGGGGGGG RRR    RRR      TTT      LLL
RRR    RRR    PPP      GGG    GGGGGGGG RRR    RRR      TTT      LLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLLLLLLLLLLLLLLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLLLLLLLLLLLLLLL
RRR          RRR PPP      GGG          RRR      RRR      TTT      LLLLLLLLLLLLLLLL
```


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(1)

RPGII Run-Time Library specific macros and symbols
File: RPGLIB.REQ, Edit: DG1001

```
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```

Author: Debess Grabazs, 24-May-1983

1-001 - Original. DG 24-May-1983

+ This file is the master source for RPGLIB.L32.
It contains definitions for macros and symbols used internally to the
RPGII Run-Time Library.

LINKAGE

```
JSB_STR= JSB
        (REGISTER = 0, REGISTER = 1 , REGISTER = 2):
        NOTUSED (9, 10, 11),

JSB_D= JSB
        (REGISTER = 0, REGISTER = 1 ; REGISTER = 0, REGISTER = 1):
        NOTUSED (6, 7, 8, 9, 10, 11),

JSB_67= JSB
        (REGISTER = 6, REGISTER = 7):
        NOPRESERVE (2, 3, 4, 5, 6, 7)
        NOTUSED (8, 9, 10, 11),

JSB_678= JSB
        (REGISTER = 6, REGISTER = 7, REGISTER = 8):
        NOPRESERVE (2, 3, 4, 5, 6, 7, 8)
        NOTUSED (9, 10, 11),

JSB_6789= JSB
```

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```
: 0058 0      (REGISTER = 6, REGISTER = 7, REGISTER = 8, REGISTER = 9):  
: 0059 0      NOPRESERVE (2, 3, 4, 5, 6, 7, 8, 9)  
: 0060 0      NOTUSED (10, 11);  
: 0061 0  
: 0062 0      LIBRARY 'RTLSTARLE';          ! SYSSLIBRARY:STARLET.L32  
: 0063 0  
: 0064 0      REQUIRE 'RTLIN:RPGDEF';        ! Context area definitions
```

J 15
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15-Sep-1984 22:49:21

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File: RPGDEF.REQ, Edit:LPT1015

```
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```

++

FACILITY: VAX RPG II

ABSTRACT:

This is a common definition file for VAX RPG II. All definitions
of data structures that must be known by the compiler and the
generated code and RTL support should be included here.
This file should be required in COMLIB.REQ.

ENVIRONMENT: VAX/VMS user mode

AUTHOR: D. Braffitt, CREATION DATE: 12-Nov-1982

MODIFIED BY:

1-001	Original	DJB	12-Nov-1983
1-002	Add RPG\$ <u>L</u> _CTX_ERROR	LPT	14-Feb-1983
1-003	Add program control block macros	LPT	18-Mar-1983
1-004	Add RPG\$ <u>K</u> _ERR_SUBSC	LPT	24-Mar-1983
1-005	Add support for record control/sequence check blocks; add RPG\$ <u>IO</u> EXCEPTION error location constants; add current CTX area ID	DJB	11-Apr-1983
1-006	RPG\$ <u>S</u> _CTX_PRINTER should be 32.	DJB	12-Apr-1983
1-007	Add RPG\$ <u>V</u> _CTX_RNF.	DJB	14-Apr-1983
1-008	Change RPG\$ <u>A</u> _RCB_EXTFL to RPG\$ <u>A</u> _RCB_EXTFLD	LPT	25-Apr-1983
1-009	Add RPG\$ <u>V</u> _RCB_MATCH	LPT	10-Jun-1983
1-010	Fix offset of some RCB fields	LPT	10-Jun-1983
1-011	Add RPG\$ <u>V</u> _RCB_CNTRLF	LPT	22-Jun-1983

```

R0122 0 | 1-012 Add RPG$V_CTX_OVPEND LPT 5-Jul-1983
R0123 0 | 1-013 Correct PRINTER context area offsets DJB 05-Jul-1983
R0124 0 | 1-014 Add RPG$B_SCB_FLAGS DJB 20-Jul-1983
R0125 0 | 1-015 Delete RPG$A_CTX_MATCHAREA LPT 21-Nov-1983
R0126 0 |
R0127 0 |
R0128 0 |
R0129 0 | +
R0130 0 | Definitions for the RPG II file context area.
R0131 0 | This area is allocated in PSECT $LOCAL by the compiler
R0132 0 | for each file immediately preceding the RAB. The actual size allocated
R0133 0 | depends on the file type.
R0134 0 |
R0135 0 | MACRO
R0136 0 |     RPG$W_CTX_FLAGS= -4,0,16,0 %, | Flag bits
R0137 0 |     RPG$V_CTX_UOFF= -4,0,1,0 %, | TRUE only if file is conditioned
R0138 0 | | by an external indicator which is off
R0139 0 |     RPG$V_CTX_EOF= -4,1,1,0 %, | TRUE only if file is at end of file
R0140 0 |     RPG$V_CTX_LOOKAH= -4,2,1,0 %, | TRUE only if file is an input file
R0141 0 | | which contains look-ahead fields
R0142 0 |     RPG$V_CTX_RNF= -4,3,1,0 %, | TRUE only if last attempt to read from
R0143 0 | | file resulted in record not found
R0144 0 |     RPG$B_CTX_ID= -1,0,8,0 %, | Version number
R0145 0 |     RPG$L_CTX_ERROR= -8,0,32,0 %, | Error number for RPG detected errors
R0146 0 |     RPG$A_CTX_SCB= -12,0,32,0 %, | Address of current entry in the
R0147 0 | | sequence control block
R0148 0 |     RPG$A_CTX_READ= -16,0,32,0 %, | Address of the READ routine
R0149 0 |     RPG$A_CTX_CRCB= -20,0,32,0 %, | Address of the current record control
R0150 0 | | block
R0151 0 |     RPG$A_CTX_OVIND= -12,0,32,0 %, | Address of the overflow indicator for
R0152 0 | | this PRINTER file
R0153 0 |     RPG$W_CTX_FL= -14,0,16,0 %, | # of lines on logical page (1-112)
R0154 0 |     RPG$W_CTX_OL= -16,0,16,0 %, | Overflow line # (1-112)
R0155 0 |     RPG$W_CTX_LINE= -18,0,16,0 %, | Current line on printed page
R0156 0 |     RPG$W_CTX_PFLAGS= -20,0,16,0 %, | Flags for print control
R0157 0 |     RPG$V_CTX_FIRST= -20,0,1,0 %, | TRUE only before first write to file
R0158 0 |     RPG$V_CTX_1PFORMS= -20,1,1,0 %, | TRUE only if first page forms
R0159 0 | | positioning has been requested
R0160 0 |     RPG$V_CTX_OVLINE= -20,2,1,0 %, | TRUE if this is an overflow line
R0161 0 |     RPG$V_CTX_OVPEND= -20,3,1,0 %, | TRUE if overflow is pending
R0162 0 |     RPG$W_CTX_SKIPB= -22,0,16,0 %, | # of lines to space before printing
R0163 0 | | (0-3)
R0164 0 |     RPG$W_CTX_SKIPA= -24,0,16,0 %, | # of lines to space after printing
R0165 0 | | (0-3)
R0166 0 |     RPG$W_CTX_SPACEB= -26,0,16,0 %, | Line number to skip to before printing
R0167 0 | | (1-112)
R0168 0 |     RPG$W_CTX_SPACEA= -28,0,16,0 %, | Line number to skip after printing
R0169 0 | | (1-112)
R0170 0 |
R0171 0 | LITERAL
R0172 0 |     RPG$K_CTX_ID= 1, | Current CTX area id
R0173 0 |     RPG$S_CTX_OUTPUT= 8, | Size of context area for output files
R0174 0 |     RPG$S_CTX_PRINTER= 28, | Size of context area for printer files
R0175 0 |     RPG$S_CTX_INPUPD= 20, | Size of context area for input and
R0176 0 | | update files

```

```

: R0177 0
: R0178 0
: R0179 0
: R0180 0
: R0181 0
: R0182 0
: R0183 0
: R0184 0
: R0185 0
: R0186 0
: R0187 0
: R0188 0
: R0189 0
: R0190 0
: R0191 0
: R0192 0
: R0193 0
: R0194 0
: R0195 0
: R0196 0
: R0197 0
: R0198 0
: R0199 0
: R0200 0
: R0201 0
: R0202 0
: R0203 0
: R0204 0
: R0205 0
: R0206 0
: R0207 0
: R0208 0

```

!+ Definitions for the RPGII file record control and sequence check blocks.
 !- This area is allocated in PSECT \$LOCAL by the compiler
 !- for each input and update file immediately following the record buffer.

MACRO

RPG\$A_RCB_RECID=	0,0,32,0 %	! Addr of record identifying indicator
RPG\$A_RCB_EXTFLD=	4,0,32,0 %	! Addr of extract field routine
RPG\$A_RCB_MATCH_RTN=	8,0,32,0 %	! Addr of match field compare and ! extract code
RPG\$A_RCB_CFR=	12,0,32,0 %	! Addr of control field compare routine
RPG\$W_RCB_FLAGS=	16,0,16,0 %	! Record control block flag bits
RPG\$V_RCB_SEQ=	16,0,1,0 %	! TRUE if record type is seq checked
RPG\$V_RCB_MATCH=	16,1,1,0 %	! TRUE if record type has match fields
RPG\$V_RCB_CNTRLF=	16,2,1,0 %	! TRUE if record type has control fields
RPG\$A_SCB_RCB=	0,0,32,0 %	! Address of the RCB of the record which ! is the current record in the sequence
RPG\$B_SCB_FLAGS=	4,0,8,0 %	! Sequence control block flag bits
RPG\$V_SCB_OPT=	4,0,1,0 %	! TRUE if record type is optional
RPG\$V_SCB_NO=	4,1,1,0 %	! TRUE if more than one of this record ! type may be present
RPG\$V_SCB_1SEEN=	4,2,1,0 %	! TRUE if one of the current record type ! has been seend
RPG\$V_SCB_LAST=	4,3,1,0 %	! TRUE if this is the end of the table ! and RPG\$A_SCB_RCB contains the ! address of the 1st element in the SCB

LITERAL

RPG\$\$RCB=	18,	! Size of record control block
RPG\$\$SCB=	5;	! Size of sequence check block

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(3)

```

: R0209 0
: R0210 0
: R0211 0
: R0212 0
: R0213 0
: R0214 0
: R0215 0
: R0216 0
: R0217 0
: R0218 0
: R0219 0
: R0220 0
: R0221 0
: R0222 0
: R0223 0
: R0224 0
: R0225 0
: R0226 0
: R0227 0
: R0228 0
: R0229 0
: R0230 0
: R0231 0
: R0232 0
: R0233 0
: R0234 0
: R0235 0
: R0236 0

!+
! Definitions for RPG error handling.
! The address of the program control block is found in RPG$A_PCB
! which is found offset from the frame pointer.
! For version 1, the only field in the program control block
! is the internal version number.
!-

MACRO
    RPG$A_PCB=          -4,0,32,0 %;  ! Address of program control block
    RPG$B_PCB_ID=       0,0,8,0 %;    ! Version number

!+
! Definitions of first parameter to RPG$IOEXCEPTION to describe where
! to find IO error.
!-

LITERAL
    RPG$K_ERR_RAB=      1,           ! Condition value in RAB field
    RPG$K_ERR_FAB=      2,           ! Condition value in FAB field
    RPG$K_ERR_FILE_CNTXT= 3;         ! Condition value in file context area

!+
! Definition of literal for error passed to RPG$ERROR
!-

LITERAL
    RPG$K_ERR_SUBSC=     5;          ! Same as COBOL for now
```

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(1)

; 0237 0
; 0238 0 ! End of file RPGLIB.REQ

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	0	0	581	00:01.1

COMMAND QUALIFIERS

; BLISS/LIBRARY=LIB\$:/LIST=LISS\$:/SOURCE=REQUIRE SRC\$:RPGLIB

; Run Time: 00:03.4
; Elapsed Time: 00:15.5
; Lines/CPU Min: 4262
; Lexemes/CPU-Min: 14579
; Memory Used: 32 pages
; Library Precompilation Complete

0331

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